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U. S. DEPARTMENT OF AGRICULTURE

MARKETING the NEW ENGLAND ROSE CROP

A Study in Marketing of Agricultural Products

U. S. DEPARTMENT OF AGRICULTURE Agricultural Marketing Service Marketing Research Division
in cooperation with the
UNIVERSITY OF MASSACHUSETTS Agricultural Experiment Station

PREFACE

Until recent years, few realized the importance of the horticultural specialties segment of our agricultural economy. However, the value of cut flowers and plants marketed by New England growers in 1949 was nearly 31 million dollars, which was greater than the value of all vegetables, fruits, and nuts marketed by farms of that area.

Roses are an important part of the horticultural specialties sold in New England, accounting for more than 10 percent of the value of the wholesale and retail sales of all cut flowers and flowering plants.

Marketing channels for floricultural products cut across State lines, and methods of distribution, procurement, and sales are so complex that no one State can investigate adequately all phases of these problems. A thorough understanding of market structures and procedures, on a regional basis, is prerequisite to a more detailed marketing research program. This study is part of a broad program of research designed to improve marketing efficiency and expand markets for farm products.

The research on which this report is based is part of the Northeast Regional Project NEM-8, "Improved Marketing for Cut Flower and Potted Plant Crops." This phase of the regional project was carried out jointly by the Massachusetts Agricultural Experiment Station and the Agricultural Marketing Service.

Rose growers in New England supplied information on their production and marketing practices for this report; Dr. Adrian H. Lindsey, Head, Agricultural Economics and Farm Management Department, University of Massachusetts, gave valuable assistance in planning and supervision of the study; the Horticultural Crops Section, Agricultural Marketing Service, made helpful revisions of the report.

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SUMMARY

1. This report on marketing New England roses from grower to first handler is based on a sample of 13 growers, representing 65 to 70 percent of the rose production in the area.

2. The growers included in this sample operated 2.96 million square feet of greenhouse area, and 1.88 million square feet of bench area. About 70 percent of the bench area was in roses. In 1955-56, they produced approximately 29.6 million salable rose blooms.

3. Wholesale florists selling roses on consignment were the most important market outlet, receiving 39 percent of the roses marketed.

4. Growers marketed 20 percent of their roses through their own wholesale stores, 19 percent through stalls in the Boston Flower Exchange, Inc., and 17 percent direct to retail florists. These roses, approximately 56 percent of those grown, were marketed by the growers through their own sales outlets.

5. Commission fees on consignment sales ranged from 15 to 20 percent of the sales returns. Nearly two-thirds of the commission agents charged 15 percent, the rest, 20 percent.

6. Approximately one-third of the New England roses had Boston as their primary destination. Forty percent went to other markets within New England, and slightly more than 25 percent were shipped out of New England.

7. Growers used their own trucks to transport two-thirds of the roses to market. Railway express and air express were used to ship roses to the more distant market outlets.

8. The wooden box is the most common container for shipping roses to New England markets. Cardboard boxes are used for shipments to more distant markets.

9. Only 3 growers in the sample used 31° F. cold storage of roses regularly in their marketing program. They were of the opinion that this innovation had helped them to solve their labor problem, to even out flower supplies, and to increase their financial returns.

MARKETING THE NEW ENGLAND ROSE CROP

By Elmar Jarvesoo and Robert A. Fitzpatrick 1/

INTRODUCTION

Roses are the first ranking greenhouse cut flower in the United States, exceeding carnations in both crop value and number of blooms by about 50 percent. In New England, roses are a close second to carnations. However, in 1949, New England marketed about 43 million rose blooms, or 11 percent of the national total. The estimated wholesale value of these blooms was approximately 3.5 million dollars, which was nearly 20 percent of the wholesale value of all cut flowers and flowering plants marketed from the New England area.

Although complete data are not available, the number of roses produced in New England may have declined since 1949. New England rose growers are faced with some serious economic problems. The expansion of lower cost outdoor production in areas with milder climates and changes in methods of transportation have increased flower supplies in virtually all markets in the United States. But flower sales have not kept pace with the increases in production. As a result, flower prices generally have been static or have declined during the post-World War II years, although the general price level has risen considerably.

Greenhouse production costs in New England have gone up since 1947; farm wage rates have risen about 50 percent, and fuel oil prices 16 percent. Stable or falling prices coupled with rising costs have made the problem of maintaining profitable levels of output increasingly difficult. In an effort to keep costs in line with receipts, growers have focused their attention on marketing and greenhouse management.

This study is concerned primarily with marketing functions at the wholesale level and with marketing practices and channels from grower to the first handler. Specific objectives are to describe the location of supplies, existing marketing channels, and trade practices in marketing New England roses, and to identify the major marketing problems at the wholesale level.

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RESEARCH PROCEDURE AND THE SAMPLE

This report is based on information obtained in 1955 by personal interviews with 13 rose growers, 9 of whom were located in Massachusetts, 2 in New Hampshire, and 2 in Connecticut. These growers operated a total of 2.96 million square feet of greenhouse area with approximately 1.88 million square feet of bench space. Approximately 70 percent of the total bench space was used for rose production. The average annual production of these growers totaled 29.6 million salable rose blooms, or 22.5 blooms per square foot of bench area. Their total production represented 65 to 70 percent of the New England rose crop.

Growers in this sample operated an average of 228,000 square feet of greenhouse and 145,000 square feet of bench area, of which 101,000 square feet were in roses. The annual average production was nearly 2.3 million rose blooms per grower. The average grower employed about 53 year-round workers. The smallest rose grower operated 30,000 and the largest 1,350,000 square feet, with a median of 146,000 square feet of greenhouse area. Three of the growers had 36,000 square feet of greenhouse area or less, and 10 growers had 75,000 square feet or more.

ROSE PRODUCTION AREAS

Most of the New England rose production is located in southern New England near the larger centers of population--Boston, Hartford, New Haven, and Stamford-Norwalk. According to data of the 1950 Census of Agriculture (Vol. 5, Pt. 1, Horticultural Specialties), Connecticut produced 19 million rose blooms, Massachusetts 11 million, New Hampshire nearly 10 million, and Rhode Island nearly 3 million blooms. Commercial rose production in Maine and Vermont was almost negligible.

Thirty-one New England rose growers reported sales of $1,000 or more in 1949, compared with 503 carnation growers. However, rose growers reported an average of nearly 1.4 million blooms each, compared with an average of 88 thousand blooms per carnation grower. As a result, the total number of carnations and roses produced and the wholesale value of sales were nearly equal. Seven of the 13 rose growers in this study reported all of their bench area in roses. Six rose growers, who also produced other flowers, reported that the percentage of bench space used for roses had decreased in recent years, while their production of pompon chrysanthemums, carnations, and potted plants was increased.

Most of the roses in New England are produced by large scale, highly specialized firms that have been in business many years. Firms included in this study have been in business an average of 48 years, ranging from 26 to 84 years.

Six New England counties were among the 48 counties in the United States which produced 2 million or more rose blooms in 1949. These were Middlesex County, Fairfield County, and New Haven County, Conn., with 9.6 million, 6.1 million, and 2.7 million blooms, respectively; Strafford County, N. H., 8.5 million blooms; Middlesex County and Hampshire County, Mass., which produced 6.9 million and 2.6 million blooms, respectively.

The annual per capita production rate in New England was 4.6 rose blooms in 1949, compared with an average per capita rate of 2.6 blooms in the United States. New Hampshire led with 17.7 blooms per capita; Connecticut, Rhode Island, and Massachusetts followed with 9.6, 3.4, and 2.4 blooms per capita, respectively.

MARKET OUTLETS

The scale of operation of individual growers determined, to some extent, the marketing channels used. The larger growers usually sold roses through several outlets, but most of them marketed the bulk of their supply through their own outlets. These outlets included grower-operated truck routes that delivered flowers directly to retailers, sales stalls in the Boston Flower Exchange, grower-operated wholesale houses, or combinations of the three. About 56 percent of all roses were marketed through the growers' own wholesale outlets, compared with 18 percent for carnations. Of this 56 percent, direct sales at the Boston Flower Exchange accounted for 19 percent, sales through grower-owned wholesale stores 20 percent, and sales to retail florists (either f.o.b. greenhouse or delivered) 17 percent (table 1).

Table 1.--Types of primary market outlets for New England roses and carnations, 1955-56

Market outlet	Roses		Carnations--percentage of total
	Number of blooms	Percentage of total	
	Millions	Percent	Percent
Wholesale florists:			
On consignment	11.42	38.6	67.1
Delivered	.76	2.5	11.0
Retail florists	4.89	16.5	12.4
Growers' stalls at Boston Flower Exchange, Inc	5.71	19.3	5.7
Growers' wholesale stores	5.94	20.1	---
Growers' retail stores	.33	1.1	1.5
Peddler-jobbers	.56	1.9	2.2
Other (supermarkets)	---	---	.1
Total	29.61	100.0	100.0

Most of the rose growers included in this survey shipped to a small number of wholesale outlets. The 3 small growers had only 1 wholesale outlet each, whereas growers with larger volumes sold regularly to from 1 to 5 wholesale dealers. One grower sold to 16 wholesalers.

Consignment selling was the principal method of marketing roses and carnations. All roses consigned accounted for 39 percent of the total marketed, compared with 67 percent for carnations (table 1). Growers with less than 36,000 square feet of greenhouse sold 82 percent of their roses on consignment, whereas the larger growers sold only 37 percent of their roses by this method. Nine of the thirteen rose growers included in this survey used commission outlets and marketed from 25 to 100 percent of their flowers in this manner. For the 3 small growers, consignment was the principal marketing method. These 3 growers had only 1 commission outlet, whereas 1 of the larger growers had as many as 16.

Direct sales (cash or credit) to wholesale florists accounted for only 2.5 percent of the roses sold, compared with 11 percent of the carnations. Peddler-jobbers purchased about 2 percent of both roses and carnations.

Commission fees varied from 15 to 20 percent of the gross sales returns. The 15 percent commission was most common, nearly two-thirds of the agents charging that fee. About one-third of the commission outlets charged 20 percent commission. This higher commission rate seems to be characteristic of commission agents operating in smaller markets outside of Boston and New York City, but some independent wholesale houses in Boston also charged 20 percent commission.

Growers who ship to commission agents in the Boston Flower Exchange have to pay a stall rent also. This fee is assessed on the basis of the shipper's total greenhouse area. In 1955, the rate was $13.20 per month for each 20,000 square feet of greenhouse or fraction thereof. Figured on the basis of 20,000 square feet, the stall rent amounted to 0.8 cents per year per square foot of greenhouse area, or less than 1 percent of the average annual gross return of about $1.25 per square foot.

MARKET AREAS

Considerable care must be exercised in packing roses to insure that they arrive at the market in good condition. (In trade language, roses are "poor shippers"; that is, they are both very delicate and highly perishable.) For long distance shipments they must be packed with ice, which increases the bulkiness and cost of transportation. These characteristics tend to limit the market area for New England roses.

The growers in this survey shipped approximately 32 percent of their roses to Boston, about 40 percent to other markets in New England, and slightly less than 28 percent outside of New England. Forty-four percent of the carnations went to markets outside of New England, and only 19 percent

went to other New England markets. Approximately the same proportions of roses and carnations were shipped to Boston (fig. 1). However, a large portion of the carnations shipped to Boston are reshipped by wholesalers to distant markets outside of New England, whereas the quantity of roses shipped out of Boston is negligible.

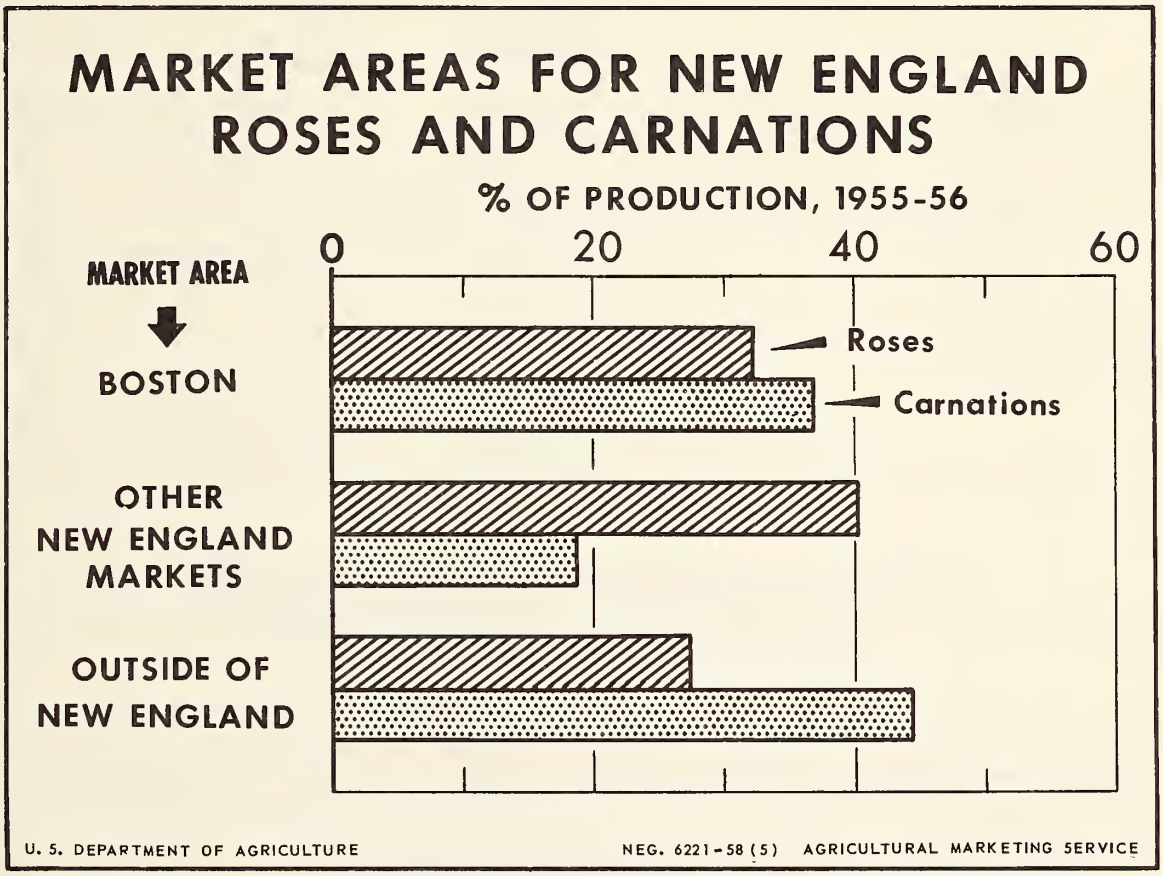

Figure 1

Other important markets for roses in New England include the larger centers of population; that is, Bangor and Portland, Me.; Springfield, Worcester, Lawrence, Fall River, and New Bedford, Mass.; Providence, R. I.; and New Haven and Hartford, Conn. Most of the roses shipped out of New England go to the New York-New Jersey metropolitan area.

TRANSPORTATION

Trucks were the most common means of transportation for New England roses. Growers included in this survey shipped more than 67 percent of their roses to market by trucks, and approximately 85 percent of these were shipped in grower-owned trucks (table 2). Railway express was used to ship 27 percent

Table 2.--Transportation used in shipping New England roses and carnations, 1955-56

Type	Roses		Carnations--
	Number of blooms	Percentage of total	percentage of total
	Millions	Percent	Percent
Grower's truck	15.50	57.1	38.1
Buyer's truck	---	---	3.2
Hired truck	2.79	10.2	7.1
Total trucks	18.29	67.3	48.4
Railway express	7.40	27.3	39.4
Air	1.20	4.5	11.9
Parcel post	.23	.9	.2
Bus	---	---	.1
Total transported	27.12	100.0	100.0

of the roses, and parcel post was used for slightly less than 1 percent. Air freight was used to ship approximately 4 percent of the roses to more distant markets.

The transportation method used by rose growers differs from that of carnation growers in that relatively more roses are transported by truck, and somewhat less by railway express and air freight. This difference in method of transportation partially reflects the difference in market areas of these two flowers.

Large and small rose growers differed in the method of transporting their roses to market. The 3 small growers used trucks exclusively, whereas the larger operators trucked 66 percent and used railway express for approximately 28 percent of their roses (table 3).

The market destination of roses was, of course, an important factor in determining the method of transportation. Truck transportation accounted for 96 percent (about 75 percent in growers' trucks) of the shipments to Boston; railway express accounted for the balance (fig. 2). The most distant shippers were located slightly over 100 miles from Boston.

For other New England markets, truck shipments accounted for approximately 76 percent of the roses marketed, and railway express for 21 percent, and parcel post for 2 percent.

Twenty-four percent of the roses marketed outside of New England went

Table 3.--Transportation used by growers in shipping New England roses, by size of greenhouse establishment, 1955-56

Type	Small growers (under 36,000 square feet greenhouse)	Large growers (over 75,000 square feet greenhouse)
	Percent	Percent
Grower's truck	9.6	58.7
Hired truck	90.4	7.5
Total trucks	100.0	66.2
Railway express	---	28.3
Air	---	4.6
Parcel post	---	.9
Total transported	100.0	100.0

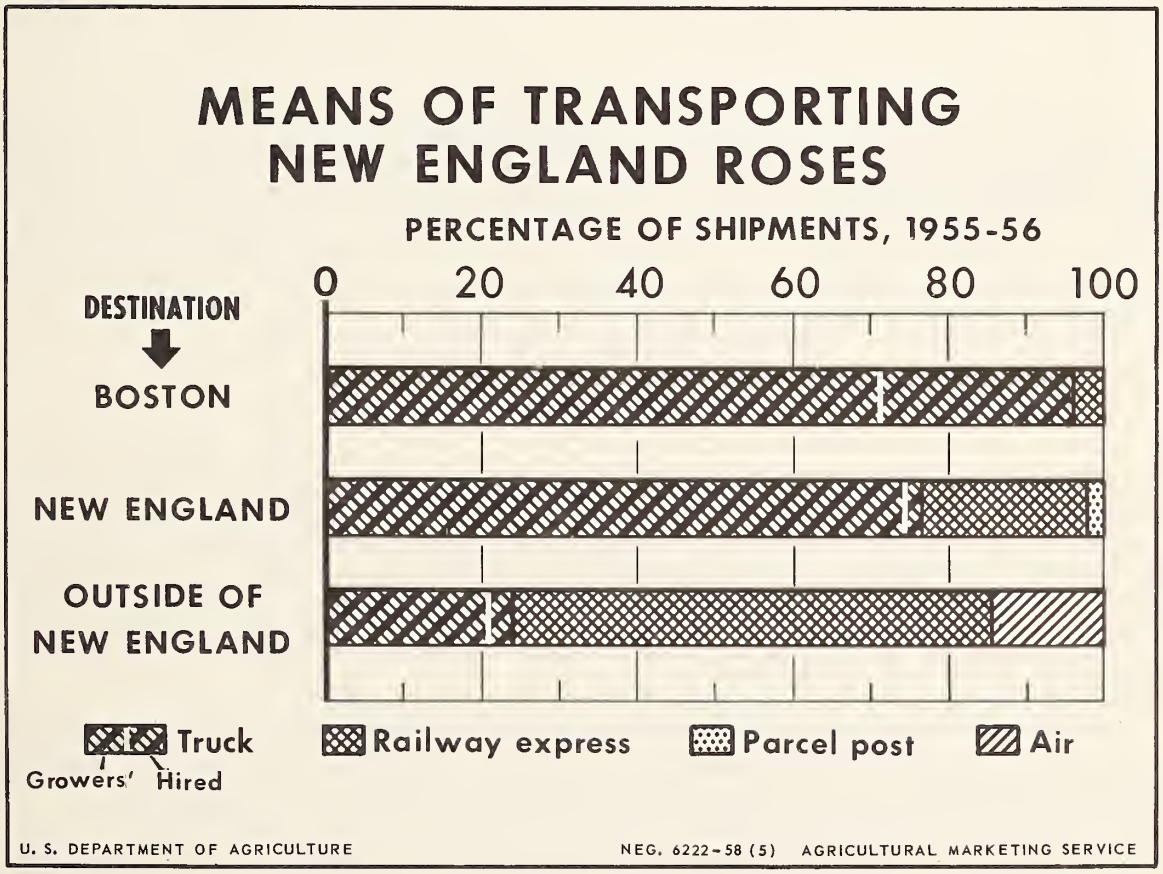

Figure 2

by truck; these were mainly roses grown in Connecticut and marketed in the metropolitan New York area, 50-100 miles away. About 61 percent of the volume was shipped by railway express and about 14 percent by air freight. Air shipments of roses went mainly to Florida and Puerto Rico, but lots occasionally were sent by air to Michigan and Ohio.

PACKAGING

Roses require more careful handling and packaging to prevent damage in transit than carnations, chrysanthemums, or gladioli.

The common trading unit in New England is the flat-type "rose pack," a bunch of 25 blooms. In this pack, rose blooms are arranged in two rows on waxed paper sheets, and the sheets are left open (flat) when placed in shipping boxes.

Nine of the thirteen growers in this survey used the wooden shipping box; some growers used both wooden and corrugated cardboard boxes; and some used the corrugated boxes exclusively. Cardboard boxes were used mainly for shipping by railway express and air freight, whereas wooden boxes were most commonly used for trucking to nearby markets. Master container sizes ranged from 42 to 54 inches in length, 15 to 18 inches in width, and 8 to 9 inches in depth.

Usually, crushed ice was used in the cartons of packed roses to keep the flowers cool and fresh en route to market. Some growers used blocks of newspapers soaked in water and then frozen. These iced blocks melt slowly and protect the packaged flowers for at least 24 hours. For more distant shipments, dry ice is sometimes used. The weight of the ice and container nearly equals the weight of the flowers. The resultant bulkiness is one reason for the relatively limited shipping radius for roses.

GRADING

Roses come nearer to being graded on a basis of uniform standards than any other cut flower. The grading criterion is the length of stem, and all blooms that meet certain quality standards (which themselves vary within the crop season) in regard to straightness and stiffness of stem, and regularity and size of bloom, are included in the length-of-stem grades. Blooms that do not meet these quality standards are usually marketed as seconds or work roses, regardless of stem length.

Grades by length-of-stem are made in New England with 3-inch intervals, and in trade practice these grades are usually designated either by the stem length in inches or by grade names, as follows: No. 2, or 9-inch roses (including blooms with more than 9 but less than 12-inch stems); No. 1, or 12-inch; Extra, or 15-inch; Fancy, or 18-inch; and Special, or 21-inch roses. Some Extra-Fancy or Extra-Specials, 24-inch and 27-inch roses, are marketed occasionally.

The quality of rose blooms usually varies over the crop season; summer flowers are lighter and have smaller blooms. Furthermore, some rose varieties produce flowers of superior quality. As a result, there is notable variation in quality and price within the same length-of-stem grade.

STORAGE

Storage of flowers at 31° F., or low temperature conditioning, is a recent innovation in flower marketing. During 1952 and 1953, 6 of the larger growers included in this survey installed cold storage refrigerators with holding box capacities ranging from 1,200 to 16,000 cubic feet. The average capacity was 4,750 cubic feet.

Of the 6 growers with cold storage facilities, only 3 reported that they were using cold storage in their rose marketing programs regularly. The remaining 3 used it primarily for hardening of flowers before shipping and storing occasional lots (not over 5 days) before holidays. Growers who had adopted the low temperature conditioning as an integral part of their marketing program reported that they did not store roses any longer than 6 to 10 days. Roses for holidays are accumulated by rotating flowers in storage, a practice which begins usually 4 to 6 weeks before holidays.

Low temperature conditioning of flowers involves problems which should be solved before it is widely practiced. For many reasons, commercial storage of roses is not always technically successful. However, it was the consensus of the three regular users of cold storage that this innovation has helped them to solve their labor problems, to even out flower supplies, and to increase their financial returns.